We claim:

1. A heat transfer fluid composition consisting essentially of: (a) 10% to 90% by volume of at least one terpene component; and (b) 90% to 10% by volume of at least one silicone component, in complementary proportional percentage amounts to retain the composition in its liquid phase at any temperature in the entire range from about 0°F to about -200°F.

2. The heat transfer fluid composition of Claim 1, wherein the at least one terpene is selected from the group consisting of acyclic terpenes, monocyclic terpenes and bicyclic terpenes.

3. The heat transfer fluid composition of Claim 2, wherein the acyclic terpenes are composed of geraniolene; myrcene; dihydromyrcene; ocimene and allo-ocimene.

4. The heat transfer fluid composition of Claim 2, wherein the monocyclic terpenes are composed of ρ-menthane; carvomethene; methene, dihydroterpinolene; dihydrodipentene; α-terpinene; γ-terpinene; α-phellandrene; pseudolimonene; limonene; d-limonene; 1-limonene; d,1-limonene; isolimonene; terpinolene; isoterpinolene; β-phellandrene; β-terpinene; cyclogeraniolane; pyronane; α-cyclogeraniolene; β-cyclogeraniolene; γ-cyclogeraniolene; methyl-γ-pyronene; 1-ethyl-5,5-dimethyl-1,3-cyclohexadiene; 2-ethyl-6,6-dimethyl-1,3-cyclohexadiene; 2-ρ-menthene; 1(7)-ρ-methadiene; 3,8-ρ-menthene; 2,4-ρ-menthadiene; 2,5-ρ-menthadiene; 1(7),4(8)-ρ-methadiene; 3,8-ρ-menthadiene; 1,2,3,5-tetramethyl-1-3-cyclohexadiene; 1,2,4,6-tetramethyl-1,3-cyclohexadiene; 1,6,6-trimethylcyclohexene and 1,1-dimethylcyclohexane.

5. The heat transfer fluid composition of Claim 2, wherein the bicyclic terpenes are composed of norsabinane; northujene; 5-isopropylbicyclo[3.1.0]hex-2-ene; thujane; β-thujene; α-thujene; sabinene; 3,7-thujadiene; norcarane; 2-norcarene; 3-norcarene; 2-4-norcaradiene;

carane; 2-carene; 3-carene; β-carene; nonpinane; 2-norpinene; apopinane; apopinene; orthodene; norpadiene; homopinene; pinane; 2-pinene; 3-pinene; β-pinene; verbenene; homoverbanene; 4-methylene-2-pinene; norcamphane; apocamphane; campane; α-fenchane; α-fenchene; santenane; santane; norcamphene; camphenilane; fenchane; isocamphane; β-fenchane; camphene; β-fenchane; 2-norbornene; apobornylene; bornylene; 2,7,7-trimethyl-2-norbornene; santene; 1,2,3,-trimethyl-2-norbornene; isocamphodiene; camphenilene; isofenchene and 2,5,5-trimethyl-2-norbornene.

6. The heat transfer fluid composition of Claim 1, wherein the at least one terpene is selected from the group consisting of d-limonene, terpinolene, α-terpinene, γ-terpinene, myrcene, 3-carene, sabinene, α-pinene and camphene.

7. The heat transfer fluid composition of Claim 1, wherein the at least one silicone is selected from the group consisting of silicones having viscosities less than 10.0 cSt.

8. The heat transfer fluid composition of Claim 1, wherein the terpene component consists essentially of d-limonene and the silicone component consists essentially of a silicone having a viscosity of 1.6 cSt.

9. The heat transfer fluid composition of Claim 1, wherein the composition further consists of at least one antioxidant and a stabilizing agent.

10. A low temperature heat transfer process using a heat transfer fluid composition comprising the steps of:

a. transferring thermal energy from the heat transfer fluid composition to a cooling fluid such that the heat transfer fluid composition is cooled to a temperature between about 0° and about -200°F;

b. transferring thermal energy from an object to be cooled to the heat transfer fluid composition; and,

c. repeating (a) and (b) until said object is cooled to the desired temperature;

wherein said heat transfer fluid composition consisting essentially of: (a) 10% to 90% by volume of at least one terpene component; and (b) 90% to 10% by volume of at least one silicone component; in complementary proportional percentage amounts to retain the composition in its liquid phase at any temperature in the entire range from about 0°F to about -200°F.

11. The process of Claim 10, wherein the thermal energy is transferred from the heat transfer fluid composition to at least one cryogenic fluid or a refrigerant.

12. The process of Claim 10, wherein the process is operated under conditions such that the temperature of the heat transfer composition ranges from about 0°F to between about -150°F and about -200°F.

13. The process of Claim 10, wherein the at least one terpene is selected from the group consisting of acyclic terpenes, monocyclic terpenes and bicyclic terpenes.

14. The process of Claim 13, wherein the acyclic terpenes are composed of geraniolene; myrcene; dihydromyrcene; ocimene and allo-ocimene.

15. The process of Claim 13, wherein the monocyclic terpenes are composed of ρ-menthane; carvomethene; methene, dihydroterpinolene; dihydrodipentene; α-terpinene; γ-terpinene; α-phellandrene; pseudolimonene; limonene; d-limonene; 1-limonene; d,1-limonene; isolimonene; terpinolene; isoterpinolene; β-phellandrene; β-terpinene; cyclogeraniolane; pyronane; α-cyclogeraniolene; β-cyclogeraniolene; γ-cyclogeraniolene; methyl-γ-pyronene; 1-ethyl-5,5-dimethyl-1,3-cyclohexadiene; 2-ethyl-6,6-dimethyl-1,3-cyclohexadiene; 2-ρ-menthene; 1(7)-ρ-methadiene; 3,8-ρ-menthene; 2,4-ρ-menthadiene; 2,5-ρ-menthadiene; 1(7),4(8)-ρ-methadiene; 3,8-ρ-menthadiene; 1,2,3,5-tetramethyl-1-3-cyclohexadiene;

1,2,4,6-tetramethyl-1,3-cyclohexadiene; 1,6,6-trimethylcyclohexene and 1,1-dimethylcyclohexane.

16. The process of Claim 13, wherein the bicyclic terpenes are composed of norsabinane; northujene; 5-isopropylbicyclo[3.1.0]hex-2-ene; thujane; β-thujene; α-thujene; sabinene; 3,7-thujadiene; norcarane; 2-norcarene; 3-norcarene; 2-4-norcaradiene; carane; 2-carene; 3-carene; β-carene; nonpinane; 2-norpinene; apopinane; apopinene; orthodene; norpadiene; homopinene; pinane; 2-pinene; 3-pinene; β-pinene; verbenene; homoverbanene; 4-methylene-2-pinene; norcamphane; apocamphane; campane; α-fenchane; α-fenchene; santenane; santane; norcamphene; camphenilane; fenchane; isocamphane; β-fenchane; camphene; β-fenchane; 2-norbornene; apobornylene; bornylene; 2,7,7-trimethyl-2-norbornene; santene; 1,2,3,-trimethyl-2-norbornene; isocamphodiene; camphenilene; isofenchene and 2,5,5-trimethyl-2-norbornene.

17. The process of Claim 10, wherein the at least one is selected from the group consisting of d-limonene, terpinolene, α-terpinene; γ-terpinene, myrcene, 3-carene, sabinene, α-pinene and camphene and the at least one silicone is selected from the group of silicones having viscosities less than 10.0 cSt.